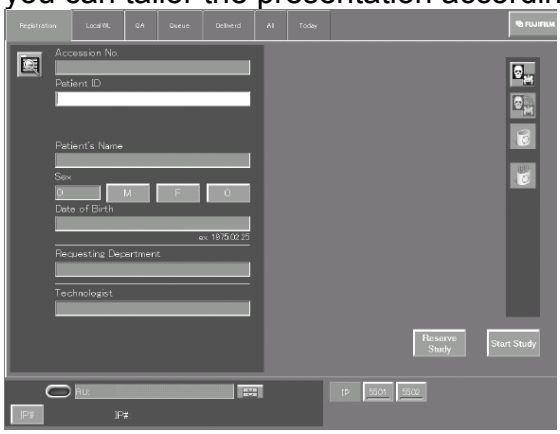
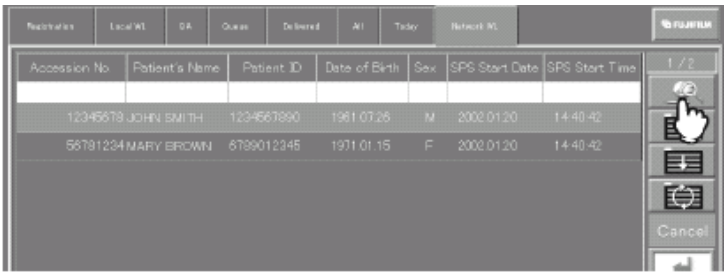
Demonstrating the Flash IIP console

The Flash IIP console combines four different functions: Patient ID, Exam Selection, Image Processing and Image Transmission. In the past, at least four different products were needed to accomplish these tasks. Based on a Windows 2000 OS, the Flash IIP console was designed with a familiar GUI to make processing an exam as simple as possible. It is possible for a technologist to process an exam in as few as THREE steps. A demonstration of the Flash IIP console is obviously most effective if you are hitting the points most significant to the prospect---so be sure to ask a lot of questions before getting started so that you can tailor the presentation accordingly.



Main Menu / Study Reception Screen

1. **Start at the beginning – registering a patient**. Ask prospect if they have a RIS/HIS (or plan on getting one.) If the facility has a RIS/HIS, be sure to inform prospect that both configurations of the Flash IIP console (Lite and Plus) come standard with DICOM Worklist Management (WLM). It is the most efficient way to process an exam and minimize typing errors and obtain accurate accession numbers.
    a. **Registering with DICOM WLM:** three options can be exercised when using a connection to the RIS/HIS via DICOM WLM. In all three cases, when a patient is selected, the demographic information will appear in the Main Menu / Study Reception screen (above).
        I. Select the Network Worklist tab on the far right of the main menu screen.



Names can be searched by QBE (query by example), which

allows the user to type in a search term to quickly access a patient entry. Names can also be found by clicking on a column heading, similar to an excel spreadsheet. Ascending or Descending Sorts can be performed in any field.

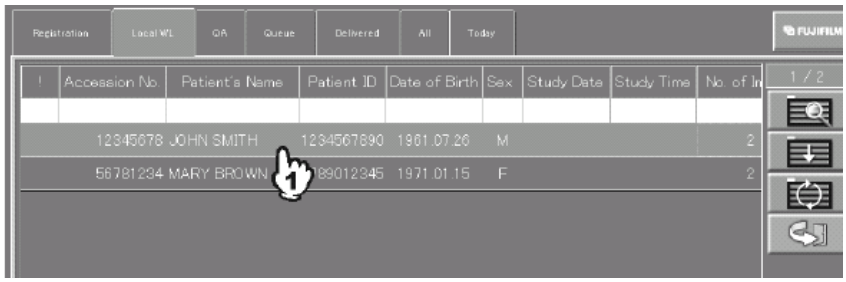
II. Barcode a requisition form which uses a patient ID or Accession number.

III. Search by depressing the from the Study Reception view.

b. **Registering Manually:** Patient information can be entered manually on the Study Reception screen (above). Users can type in patient demographic information with keyboard or use the touch screen interface. Once entered, the user has the option to start the exam immediately, or reserve the study to the Local Worklist by selecting the Reserve Study icon.

Ex. Because no beginning date or time is assigned until the study is started, this function works well for overnight technologists who can enter/reserve multiple portable exams for the early a.m. portable teams.

c. **Local Worklist:** The local worklist maintains patient information from cases that were already entered and reserved (as described in B above) or cases that were started but not yet completed. A patient name can be selected from the list and opened to appear in the Study Registration screen, just like those selected from the Network Worklist using the green arrow/execute or double click selection.



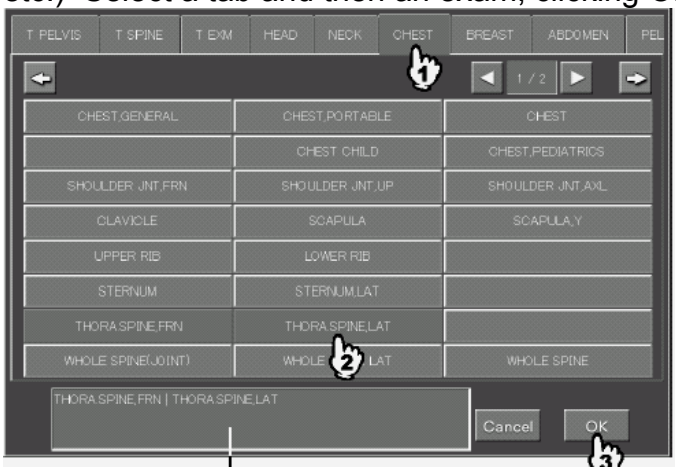
2. **Selecting the Exam.** Once the patient information is available on the Study Registration screen, an exam menu must be selected to begin processing the IP.

a. **Auto Exam Select** is an optional feature which eliminates the need to select an Exam Menu for the patient. How it works: the hospital's CPT (procedure) codes are mapped to the Fuji exam menus on the IIP. When a patient name is selected from the DICOM WLM (via RIS/HIS), the exam procedures to be done are also transferred to the Study Registration screen. So if Davey Jones is registered into the RIS/HIS to receive a two-view chest exam at the hospital, the Fuji exam menus for PA Chest and

Lateral Chest will automatically show up on the Study Registration screen, eliminating this step for the technologist.

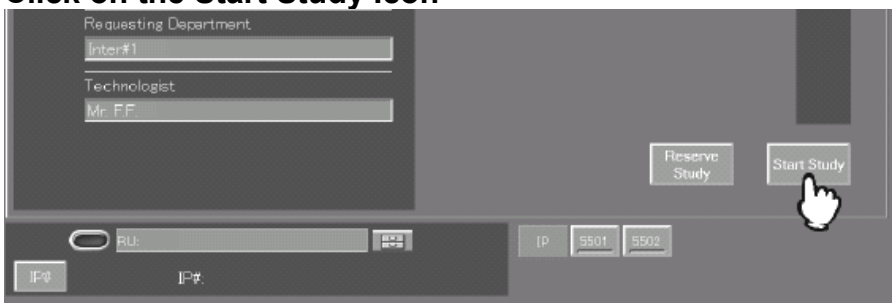
b. **Manual Selection** of an exam menu would need to be done if an additional exam needed to be included or if there is no RIS/HIS. Select the Exam Menu icon appearing on the right of the Study Registration screen.

This will pull up the Exam Menu screen featuring tabs with menus relating to specific anatomical areas (head, neck, chest, abdomen, etc.) Select a tab and then an exam, clicking OK when complete.



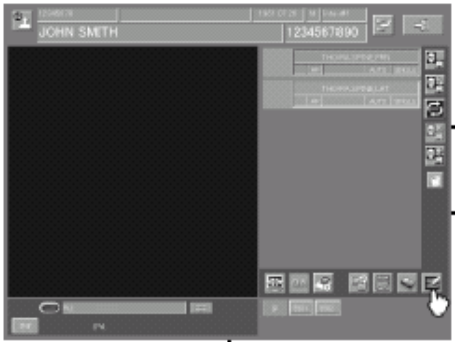
HINT: If you are demonstrating the Flash IIP and would like to show the efficiency of DICOM WLM and Auto Exam Select but don't have a network connection, simply enter a few patient names with exam menus and click Reserve Study to save them to the Local Worklist. When demonstrating, explain to the prospect that network worklist is not available, but if you select the Local Worklist, this is how the patient information will appear. DICOM WLM and Auto Exam Select are the features which enable **3 Step Exam Processing**, so this is an important step in showing the simplicity of the FCR System.

4. **Click on the Start Study Icon**



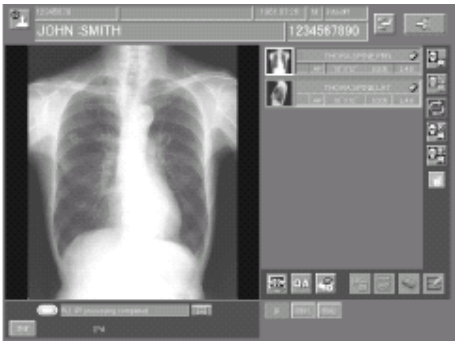
This will take you to the Study Execution Screen (below).

5. **Barcode the IP/Cassette** Select the exam that is to be processed. When it is highlighted, take the barcode scanner and barcode the IP/Cassette. The reader can then identify who the patient is and what the image is on the IP. That IP/Cassette can now be processed in any of the FCR readers on the network. IP designation will appear in the menu bar. The image will automatically be sent back to the Flash IIP where it was identified (barcoded.) The next menu on the IIP will be automatically highlighted so that the next IP/Cassette can be identified. It is ok to select a different menu if images are acquired out of order.



Study Execution screen

6. **Preview the patient exam:** The patient's image will appear on the Flash IIP console as it is being scanned inside the FCR reader---so in as few as 15 seconds, the image will start to appear on the Flash IIP monitor.



7. **QC the Image:** Users can review individual images manually and approve them for transmission (recommended) or have images transferred directly to Imagers or PACS automatically. Since the image that was scanned on the FCR is likely blank (the IP/Cassette will

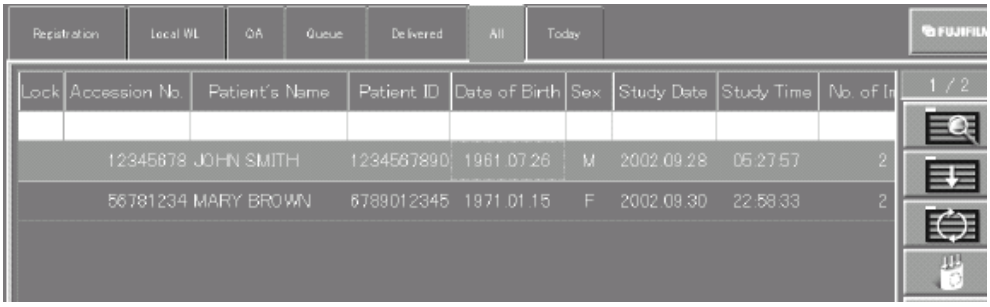
not be exposed for demonstration purposes), show that the user can immediately go into QA, print the image or send it to PACS using the icons from the study execution screen.

BUT, you can demonstrate best by showing an actual image. Select the Back icon (found at the top right hand corner of the screen) to return to the main menu. If there are remaining exams, the following box will appear:

If *Finish* is selected, that patient study will be closed and go to the *Waiting for QA* orientation. This depends on the configuration. Most often Finis sends the images to PACS

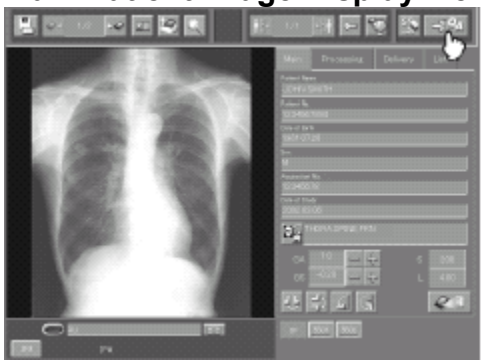
If *Suspend*, that patient study will be paused and will return to the Local Worklist. *Cancel* will allow you to escape from that command.

a. Select the ALL tab from the main menu



b. Select a patient case that includes an image. Click OK

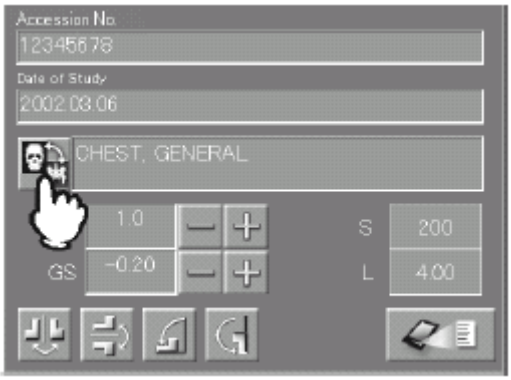
c. Main Patient Image Display view



i. This is a great vehicle to show the Window / Level (contrast and density changes) adjustments with the

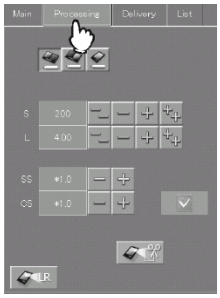
touch of your finger or the mouse. Just press your finger on the image and move it horizontally and vertically to get the effect. If the image changes too dramatically, press the eraser icon at the top of the screen in the right corner.

ii. Reprocess an image with a different menu. If the technologist selected a Chest menu when it should have been a Foot, the user can select the menu icon to make



that change.
Once depressing the icon, you will be at the same anatomical menu selection screen as that when the patient exam is originally chosen. Talk about how quickly that change is applied to the image.

iii. Show the ability to flip and rotate the image by selecting one of the icons. These tools are available in the main patient screen to minimize the number of steps that the user needs to take for simple procedures.



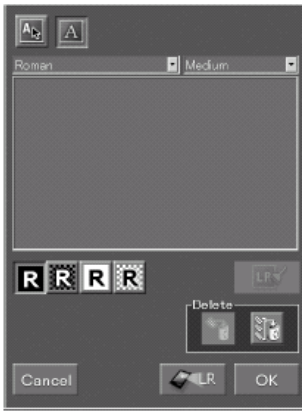
d. Processing Select the Processing Tab. From this screen, the user can do additional adjustments to Sensitivity and Latitude and apply markers.

i. **Markers** can be applied by selecting the

icon. Demonstrate how quickly the user can apply and move the annotation on the image. Touch the marker with your finger and then touch the area on the image where you would like to place it. Note that you can relocate it if it

covers anatomy---competitive systems can't do this. Click OK or Cancel to remove.

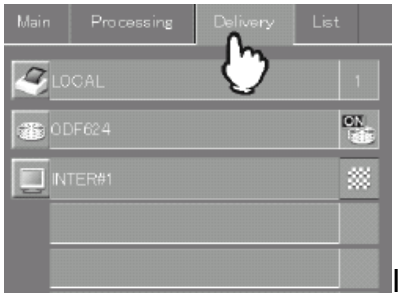
ii. **Free Text Annotation** This feature allows the technologist to type free text notes about the exam or patient to the radiologist. Select the icon to access this screen. The following screen will appear



The tech can click on the box and type comments. Font type and size can be configured as desired. Pre-configured markers can also be inserted from this screen. Once OK is clicked, the free text box will be inserted into the image and can be relocated by moving it with finger on the screen or using the mouse. The "R" icons below allow the user to adjust the background of the annotation.

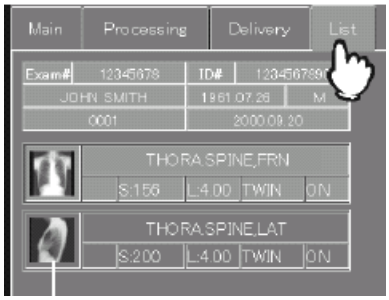
iii. **Image collimation** The Flash IIP contains a wide set up menus for automatic collimation (a.k.a. black borders) This is a standard feature with both Flash IIP configurations. For menus that the user would like to apply collimation manually, the user has the ability to adjust collimation. Select the icon from the QA Processing Tab. From here, a shape can be selected to outline the image. If choosing the rectangle, for example, the user can outline the shape of the image that is not white. Click preview and the edges will be black. The shades of gray can be adjusted according to user preference.

e. **Select Delivery Tab** The Delivery Tab enables the user to select the location for transmitting the patient case.



Images can be auto-routed to multiple network locations but the user can add new destinations and manually push images from this screen.

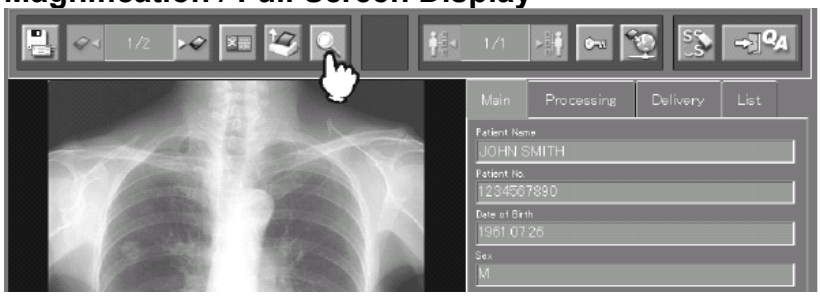
f. **Select the List Tab**



The List view shows thumbnail views of all images within a patient case. The user can move the order of the images by selecting one and moving it before or after the other image(s).

8. **Other features from the Main Patient Screen**

a. **Magnification / Full Screen Display**



Select the “magnifying glass” icon to show Image Magnification and Full Screen Display features. In selecting this option a special tool bar will appear

Zoom-in :
Select , and then select the zoom-in central point on the image. Whenever the point is selected, the image is zoomed in with the selected point as central.

Zoom-out :
Select , and then select the zoom-out central point on the image. Whenever the point is selected, the image is zoomed out with the selected point as central.

Move :
Select , and then select the arrow icons to move the image. (Use this function to display th undisplayed part of the magnified image in the display image field when zooming it in.) Instead of using the arrow icons, the image also can be moved by selecting the target position and moving it .

GA (contrast)/GS (density) change :
Select , and then select the arrow icons (/ :GA, / : GS) to change values. Instead of using the arrow icons, the value can be changed by selecting the appropriate positio in the image and moving up or down (GA) / left or right (GS).

Actual-size display :
Select . The image is displayed in the same size as one recorded on IP.

1-to-1 pixel-size display :
Select . The image is displayed in the condition that one pixel of the original image equals one pixel on the display.

Window-fit display :
Select . The image is displayed in proper size for the image display field.

Full-screen display :
Select . The image is displayed in the full-screen size image display field. To release the full screen display, select again.

b. **Failing an image** If the technologist should determine that an image is unacceptable, it can be "failed" using the appearing at the top of the patient screen. If this is depressed, the image will not be transferred to PACS or imagers for printing.
c. **Locking an Image** If the technologist would like to ensure that an image is not erased, the image can be "locked" using the icon at the top of the screen.
d. **Saving the Image to JPEG format:** Images can be saved to a floppy disk in a compressed JPEG format for teaching files or other purposes. The at the upper left of the screen will provide directions to save the image via disk on the floppy drive of the IIP.

A final note: many features are described throughout this demonstration, and additional tools are available to the user. Be cognizant that showing all of these terrific features to a prospect could lead her to think that all of these steps are *necessary* in processing exam. The most important thing that you can convey about the IIP is its simplicity. 3 Step Processing. Most clinical users will use very few of the advanced features on a regular basis---but the advanced tools are available if needed.